

# (12) UK Patent Application (19) GB (11) 2 236 352 A (13)

(43) Date of A publication 03.04.1991

(21) Application No 8917581.4

(22) Date of filing 01.08.1989

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(51) INT CL<sup>5</sup>  
F16B 2/12

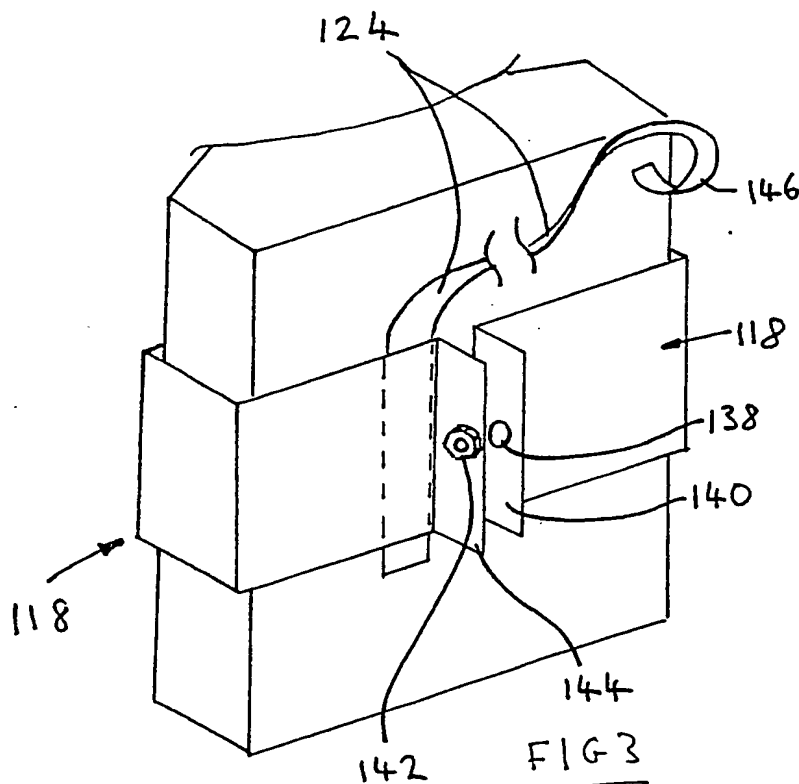
(52) UK CL (Edition K)  
E2A AGKF A370 A374 A379  
U1S S1696

(56) Documents cited  
GB 2137684 A GB 1215095 A GB 0966351 A  
GB 0663403 A GB 0539544 A

(58) Field of search  
UK CL (Edition K) E2A  
INT CL<sup>5</sup> F16B

## (54) Post clamp

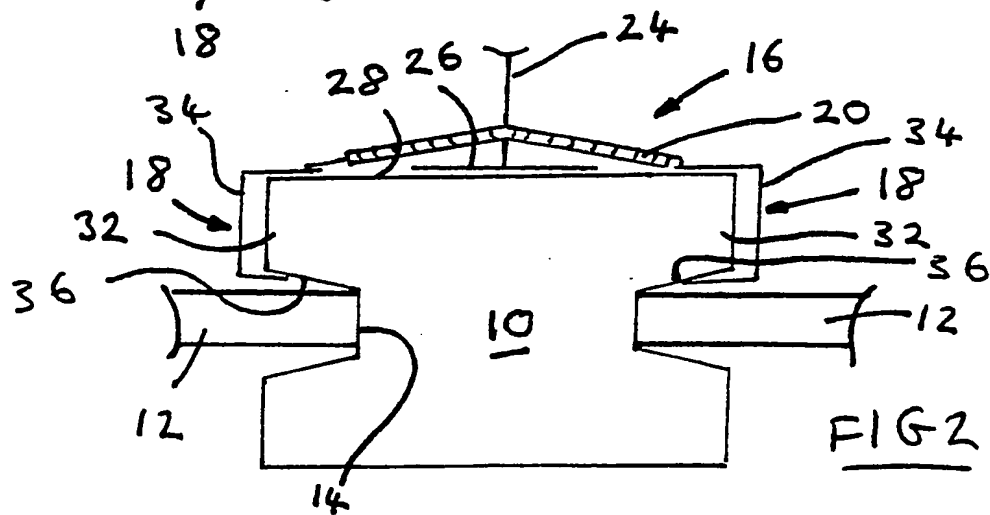
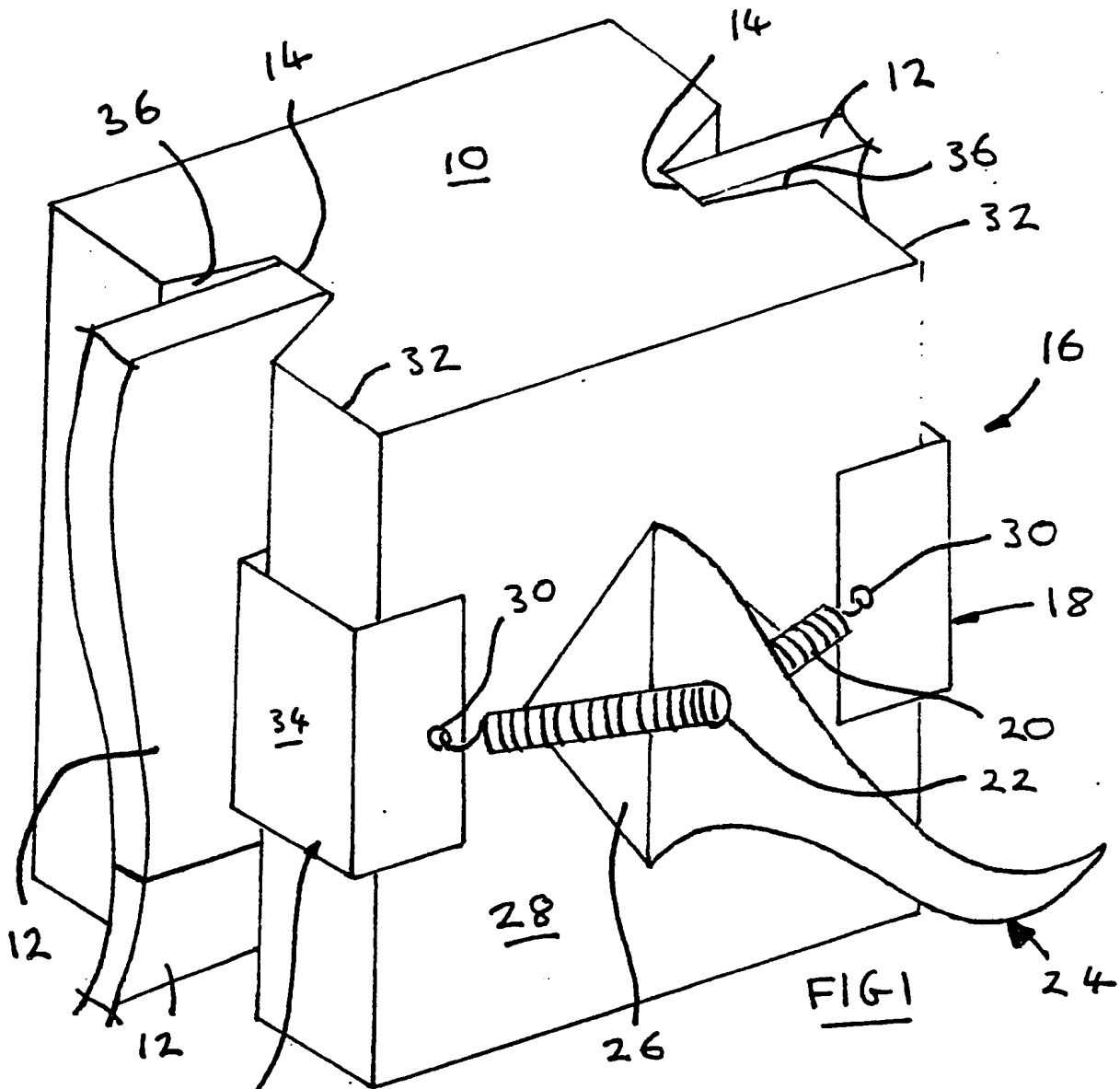
(57) A clamp for attachment to an upright post comprises engagement portions 118 which grip the sides of the post and which have projecting portions 140, 144 drawn together by a bolt or spring mechanism. As shown holes are provided for a tightening bolt and a support hook is welded to one portion. In another arrangement a tension spring extends between the portions 140, 144 and through a hook member.



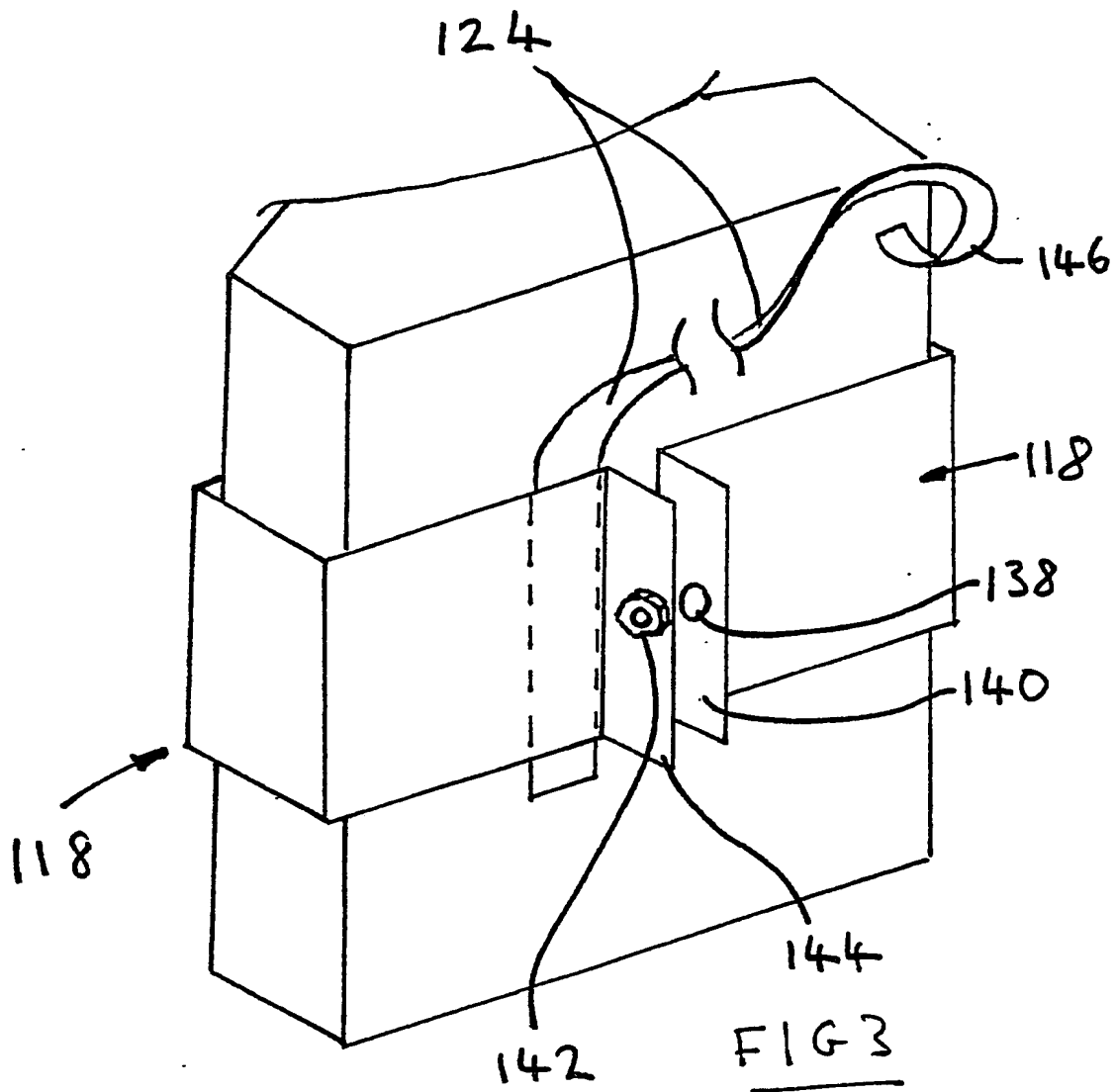
For suspension  
with cable or  
other  
hook

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IMPROVEMENTS IN OR RELATING TO CLIPS.

The present invention relates to clips and to a method of attaching a clip to an article and to an article including a clip attached thereto. The invention is particularly, although not exclusively applicable to clips arranged to be attached to posts.

In recent years fences have been erected from concrete posts comprising I-section beams spaced from each other with concrete slats extending between the grooved opposed portions of adjacent posts. However, such fencing is not aesthetically pleasing. It has been proposed to drill holes into the side of the posts in order that wire hanging baskets can be suspended from the posts in order to at least partially cover them from view. However, as the posts are of optimum dimensions in any event, and as the posts have to support laterally the concrete planks extending between them, the drilling of such holes severely weakens the strength of the posts and can lead to their collapse.

According to one aspect of the present invention a clip includes a pair of spaced engagement portions adapted to engage with spaced portions of an article and means arranged to urge the engagement portions towards each other when the engagement portions engage spaced portions of an article such that the clip is mounted on an article. When such a clip is attached to a concrete post forming part of a fence, there is no need to interfere with the structure of the post in order to attach the clip thereto. Resilient means may be arranged to urge the engagement portions towards each other.

At least one of the engagement portions may be arranged to be a force or wedge fit on an article. At least one of the engagement portions may include a pair of spaced portions extending in a direction towards the other engagement portion from a connection portion which connection portion extends between and connects the spaced portions.

The clip may include an item arranged to extend from at least one of the engagement portions. The item may comprise a hanging basket. The item or the hanging basket may be arranged to be located above or in front of the clip, when the clip is mounted on an article.

When the clip is mounted on an article the means which urge the engagement portions towards each other may be arranged to bias an item (whether secured to or separate from the engagement portions) against a surface of the article on which the clip is mounted. The item may be arranged to be biased against a surface of the article located between the engagement portions. The means which urge the engagement portions towards each other in a first direction may be arranged to bias an item in a second direction against a surface of the article on which the clip is to be mounted. The first direction may be arranged to be substantially perpendicular to the second direction.

The resilient means may be arranged to extend through an item. The item may be arranged to engage an article at at least two spaced locations, and at least one of those locations may be arranged to be below the extent of the resilient means or the means which urge the engagement portions towards each other. The item may include a surface, for instance comprised on one side of

a plate, arranged to abut a surface of an article on which the clip is mounted. The clip may comprise a spring.

According to another aspect of the present invention, a method of attaching a clip to an article comprises moving or urging a pair of spaced engagement portions towards each other to grip the article. The method may comprise first moving the engagement portions away from each other against a force exerted by resilient means, then positioning the clip into the required position relative to the article and then allowing the resilient means to move the engagement portions back towards each other under the influence of the resilient means. Alternatively the spaced engagement portions may be moved towards or urged towards each other by screw threaded means.

The method may comprise allowing at least one of the engagement portions to wedge with the article on which the clip is to be mounted when the engagement portions undergo relative movement towards each other under the bias of the resilient means.

The method may further comprise allowing the resilient means to exert a force on an item to hold that item against the article when the clip is being mounted on the article.

The present invention also includes an article including a clip as herein described attached thereto.

The present invention includes any combination of the herein described features.

The invention may be carried into practice in various ways, but two embodiments will now be described by way of example, and with reference to the accompanying drawings, in which:-

Figure 1 is a schematic perspective view of a fence post including a clip according to a first embodiment attached thereto;

Figure 2 is a schematic sectional view taken through the centre of the clip and post shown in Figure 1; and

Figure 3 is a view similar to Figure 1 of part of a fence post including a clip according to a second embodiment attached thereto.

The fence comprises an I-shaped post 10 which extends upwardly with a number of slats 12 stacked on top of each other and extending from either side of a recess 14 formed in either side of the post.

A clip 16 comprises a pair of spaced brackets 18 connected together by a spring 20 with the spring 20 extending through an opening 22 formed in a hook 24. The spring 20 is under tension and biases the two brackets 18 towards each other and also biases a rear plate 26 of the hook 24 against a forwardly facing surface 28 of the post 10.

The clip is assembled and attached to the post as follows. Each end of the spring 20 is hooked through holes 30 formed in each of the brackets 18 after the spring has been threaded through the opening 22 in the hook 24. The brackets 18 are then pulled away from each

other and placed over the flanges 32 of the I-shaped post 10. The brackets 18 comprise generally U-shaped sections which sections of the brackets open towards each other, and the open portion of those brackets diverge outwardly relative to the end 34 of the brackets, but not to the same extent that the flanges 32 diverge outwardly in that direction. Accordingly, when the brackets 18 are allowed to approach each other under the influence of the spring 20 they engage with and wedge on a rearwardly facing portion 36 and the forwardly facing surface 28 of the post and the ends 34 of the brackets remain just out of contact with the flanges 32. Accordingly, the spring 20 holds the brackets in place, and the wedging of the brackets with the post assists in the maintenance of the clip 16 in the required position on the post.

As can be seen more clearly from Figure 2, the spring 20 extends outwardly from the forwardly facing surface 28 of the post 10 and accordingly the spring also acts on the hook 24 to bias the rear plate 26 against the forwardly facing surface of the post. The plate 26, as can be seen from Figure 1, extends beneath the elevation of the spring 20, and the plate 26 maintains its contact with the surface 28 of the post such that any force exerted on the hook 24 to cause it to slide down the surface 28; or to cause it to pivot forwardly and outwardly relative to the post is resisted by the tension in the spring and by abutment of the lowermost portion of the plate 26 with the forwardly facing surface 28 of the post 10.

A hanging basket may be suspended from the hook 24. Alternatively a washing line could be attached to that hook. Alternatively or additionally one or more hanging baskets or other articles may be attached to the



brackets 18 such that they are suspended from or extend away from those brackets when mounted on the post.

In the embodiment shown in Figure 3 like parts to those shown in Figures 1 and 2 have been given the same reference numeral prefixed by the number 1.

The brackets 118 are urged towards each other by a bolt (not shown) which passes through an opening 138 formed in a forwardly facing flange 140 on one of the brackets 118 and which threadably engages a nut 142 which is riveted to a hole formed in a forwardly facing flange 144 of the other bracket 118.

A hook 124 is welded to the rear of one of the brackets and extends forwardly and upwardly in front of the post. The hook 134 terminates at its end remote from the post in a curl 146 from which a hanging basket (not shown) can be suspended with the basket obscuring the top of the post or the clip or both.

Any tendency for the hook to pivot forwardly and downwardly relative to the clip serves to urge the brackets more firmly towards each other and bind the clip even more firmly into engagement with the post.

In an alternative embodiment (not shown) the clips may be attached to an I-beam, for instance, in order to put a cable clamp thereon, and the beam may extend in any orientation and need not necessarily extend in a vertical direction.

CLAIMSMAIN STATEMENT OF INVENTION

According to one aspect of the present invention a clip includes a pair of spaced engagement portions adapted to engage with spaced portions of an article and means arranged to urge the engagement portions towards each other when the engagement portions engage spaced portions of an article such that the clip is mounted on an article. When such a clip is attached to a concrete post forming part of a fence, there is no need to interfere with the structure of the post in order to attach the clip by a bolt which passes through an opening formed in a forwardly facing flange on one of the brackets and which threadably engages the nut which is rivited to a hole formed in a forwardly facing flange of the other bracket by turning the threadable bolt, which by turning clockwise urges to the two engagement portions towards each other. .

At least one of the engagement portions may be arranged to be a force or wedge fit on an article. At least one of the engagement portions may include a pair of spaced portions extending in a direction towards the other engagement portion from a connection portion which connection portion extends between and connects to the spaced portions.

The clip may include an item arranged to extend from at least one of the engagement portions. The item may comprise a hanging basket bracket. The item or the hanging basket may be arranged to be located above or in front of the clip, when the clip is mounted on an article.

When the clip is mounted on an article the means which urge the engagement portions towards each other may be arranged to bias an item (whether secured to or separate from the engagement portions) against a surface of the article on which the clip is mounted. The item may be arranged to be biased against a surface of the article located between the engagement portions. The means which urge the engagement portions towards each other in a first direction may be arranged to bias an item in a second direction against a surface of the article on which the clip is to be mounted. The first direction may be arranged to be substantially perpendicular to the second direction.